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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/858,130	05/15/2001	Stephen J. Fantone	0215/US	1748
30333	7590	01/27/2005	EXAMINER	
FRANCIS J. CAUFIELD			DIEP, NHON THANH	
6 APOLLO CIRCLE			ART UNIT	
LEXINGTON, MA 02421-7025			PAPER NUMBER	

2613

DATE MAILED: 01/27/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/858,130

Applicant(s)

FANTONE ET AL.

Examiner

Nhon T Diep

Art Unit

2613

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 September 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,4-7,9 and 12-20 is/are rejected.
- 7) ☒ Claim(s) 3,8,10 and 11 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 May 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 11/1/2004 with respect to claims 1-2, 4-7, 9, 12-20 have been fully considered but they are not persuasive; however, arguments with respect to claims 3, 8 and 10-11 are persuasive.

With regard to the applicant's arguments that: "Moreover, the Office Action fails to prove that the cited references "teach or suggest all the claim limitations", and has thus failed another requirement for establishing a prima facie case of obviousness. The Examiner utterly misconstrues the primary reference, Zernov, et al. (Zernov) as teaching several basic elements of the claimed invention. In section 2, 2nd paragraph of the Office Action, the Examiner asserts that Zernov. et al. discloses a "solid state imager [that] has substantial sensitivity to infrared radiation". However, the lines cited in Zernov, 49-60 of col. 6, say nothing whatsoever about substantially infrared-sensitive solid state imagers and, in fact, are completely silent about the sensitivity of imagers at all. The cited lines in Zemov disclose nothing more than "a number of infrared (IR) lights that operate in the range between 750-900 nanometers while the Examiner fails to explain how this teaches a "solid state imager [that] has substantial sensitivity to infrared radiation" as claimed in the present application. Zernov does not make any reference to the use of infrared-sensitive imagers anywhere in its disclosure and, thus, one cannot reasonably assume that Zernov teaches their use. Anyone of ordinary skill in the art understands that there is a clear distinction between a mere light emitter (or light source) and a solid state imager (e.g., a camera) (page 2, line 26 – page 3, line

Art Unit: 2613

14). The examiner respectfully disagrees. The following paragraph from the above cited and argued column (col. 6, ln. 61 – col. 7, ln. 4) shows that the camera of Zernov et al is provided with an anti-reflective coating to IR light to minimize and/or prevent reflections and that it clearly shows the camera of Zernov et al is substantially sensitive to infrared radiation.

With regard to the applicant's arguments that : "Caimi et al, in no manner discloses a solid state imager which more than one operating mode that controls an imager's sensitivity to light." (page 4, ln. 3 – 18). The examiner read the claim in light of the specification which discloses "a first operating mode in which it is sensitive to both visible and infrared radiation, and a second operating mode in which it is sensitive to visible radiation only" (page 5, ln. 34 – page 6, ln. 2) and because of that, Caimi et al is used to show only that switch has been used to switch between two sources of different wavelength emitters and that would be helpful to Zernov et al to save precious power by only turn on what is used. It is the examiner's opinion that the combination with its teaching is appropriate. It is further notice that Caimi et al does not need to have an imager (a camera) "which more than one operating mode" to reject the above cited limitation. There is no limitation in the rejected claim (claim 1) that recites "a solid state imager which more than one operating mode.", just simply "an imager have an operating mode".

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-2, 4-7, 9, 12-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zernov et al (US 6,097,424), in view of Caimi et al (US 4,777,501).

Zernov et al discloses a submersible video viewing system comprising the same subsurface video observation system comprising: a solid state imager wherein the solid state imager has substantially sensitivity to infrared radiation (fig. 4, col. 6, ln. 49-60); video signal generating means for generating a video signal corresponding to the image formed on the solid state imager (col. 4, ln. 19-22); mounting means for mounting the solid state imager on a watercraft so that the imager forms an image of an underwater area adjacent the watercraft (fig. 1); and a video display device arranged to receive the video signal and to display a visible image corresponding to the image formed on the solid state imager (col. 1, ln. 15-17 and col. 4, ln. 16-18) as specified in claims 1 and 15; is sensitive to visible light in the range of about 400 to 700 nm (Intra blue = visible light) as specified in claim 4; the mounting means are arranged to mount the solid state on the hull of the watercraft (fig. 1) as specified in claims 6 and 18; the mounting means are arranged to mount the solid state imager on an outboard motor attachable to the watercraft (fig. 10) as specified in claims 9 and 19; a source of infrared radiation mounted on the outboard motor so as to direct infrared radiation to an area imaged by the solid state imager (inherently included) as specified in claims 12 and 20; the video display device comprises a liquid crystal display (col. 1, ln. 15-17) as specified in claim 13; a source infrared radiation arranged to direct infrared radiation on to an area imaged

Art Unit: 2613

by the solid imager (fig. 4, col. 6, ln. 49-60) as specified in claim 14. It is noted that Zernov et al does not particularly disclose that:

- a. a solid state imager having an operating mode as specified in claims 1 and 15;
- b. the solid state imager is a charge coupled device as specified in claims 2 and 16;
- c. has a first operating mode wherein it is sensitive to both visible and infrared radiation and a second operating mode in which it is sensitive to visible radiation only as specified in claims 5 and 17; and
- d. a plurality of the solid state imagers are provided to enable viewing through the entire angle of 360 degrees horizontal surrounding the watercraft as specified in claim 7.

With regard to a-c: Caimi et al teaches a switching device used to switch between two sources of different wavelength emitters (col. 3, ln. 54-58) and therefore, it would have been obvious to one of ordinary skilled in the art at the time the invention was made to modify the system of Zernov et al by using the switching device as taught by Caimi et al to operate the camera system with different emitting radiation wavelengths namely intra blue and infrared radiations. Doing so would help to save power. Further more, it would have been obvious that the cameras as disclosed by Zernov et al would have been very small sized CCD cameras since small sized CCD cameras would be easy to install.

With regard to d: It is noted that, Zernov et al does further disclose that another object of the invention is to provide a video system that can accommodate multiple cameras to provide forward and reverse viewing and/or an expanded field of view. Therefore it would have been obvious to one of ordinary skilled in the art at the time the invention was made to provide a plurality of the solid state imagers or a motor for rotating the solid state imager relative to the hull of the watercraft, and associated indicator for providing a visual indication of the direction in which the solid state imager is pointing as an alternative to multiple cameras system so as to obtain images all around the cameras including images viewing through the entire angle of 360 degrees horizontal surrounding the watercraft.

Conclusion

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Allowable Subject Matter

5. Claims 3, 8 and 10-11 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nhon T Diep whose telephone number is 703-305-4648. The examiner can normally be reached on m-f.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chris S Kelley can be reached on 703 305-4856. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2613

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ND
1/21/2005


NHON DIEP
PRIMARY EXAMINER